

REMARKS

Reconsideration and allowance are respectfully requested in view of the foregoing amendments and the following remarks.

Upon entry of this amendment, claims 1-17 and 19-28 are pending in the application. By this Amendment, claim 1 has been amended.

Applicants appreciate the courtesies extended by Examiner Nasri to Applicants' representative during a personal interview conducted on December 5, 2005. The substance of this personal interview is discussed in greater detail below.

Claims 1-9, 13-15, 17, 19, 21, 23, 27 and 28 are rejected under 35 U.S.C. § 102(b) as being anticipated by Riches et al. (U.S. Patent No. 4,550,967). This rejection is respectfully traversed.

Claim 1 is directed to a plug retaining assembly including a plug including a lug, a socket to interface with the plug, and a retaining clip including a lug engaging mechanism structured to allow disengagement of the plug from the socket at a predetermined release force applied to the plug. The retaining clip is movably positioned with respect to the socket for movement between (1) a non-plug-retaining position, and (2) a plug-retaining position wherein a sloping surface of the lug engaging mechanism engages the lug. The sloping surface has an angle that is at least partially determinative of the predetermined release force. The retaining clip is movable between the non-plug-retaining position and the plug-retaining position while the plug is engaged with the socket.

As agreed during the personal interview (see Interview Summary), Riches does not disclose the plug retaining assembly as recited in claim 1.

First, Riches does not disclose a plug including a lug, with a predetermined release force applied to the plug, as recited in claim 1. Rather, the Office Action identifies receptacle 10 as a plug including a lug 20, and spring rings 40, 50, 60, 70 as a retaining clip provided to push-on pull-off connector member 30. At the outset, Applicants respectfully disagree with the Office Action's characterization of the "receptacle" 10 as a plug when it clearly is a socket instead. In any event, the lug 20 of Riches is provided to the receptacle 10 which is fixed in place. Therefore, the "plug" 10 in Riches is not subject to application of a release force. Accordingly, Riches does not disclose a predetermined release force applied to the plug as claimed. A push-on or pull-off force is applied to the connector member 30 which does not include the lug 20.

Second, Riches does not disclose a retaining clip including a sloping surface that engages the lug, wherein the sloping surface has an angle that is at least partially determinative of the predetermined release force as recited in claim 1. The Office Action asserts that the spring ring does provide a sloping surface having an angle if you draw a tangent on the surface. To begin with, Applicants do not understand how one defines the curved surface of the spring ring with a single tangent. Moreover, Riches does not disclose or suggest how such an angle defined by the tangent is at least partially determinative of the predetermined release force. Rather, Riches merely discloses adjusting the degree at which the spring rings project into the slot (e.g., see col. 3, lines 43-50 and col. 4, lines 11-15).

Third, Riches does not disclose a retaining clip that is movably positioned with respect to the socket for movement between (1) a non-plug-retaining position and (2) a plug-retaining position, wherein the retaining clip is movable between the non-plug-retaining position and the plug-retaining position while the plug is engaged with the socket as recited in claim 1. The Office Action asserts that the spring rings 40, 50, 60, 70 do move when the lug 20 is pushed in

slot 36. However, Riches does not disclose an arrangement wherein the spring rings are movable while the plug is engaged with the socket.

Withdrawal of the rejection of claim 1 is respectfully requested.

Claims 2, 3, 13-15, 17, 19, and 21 are allowable by virtue of their dependence on claim 1 and additionally allowable for their recitation of additional patentable subject matter. For example, Riches fails to disclose a retaining clip that includes a groove adapted to receive an upper portion of the plug when the retaining clip is in the plug retaining position as recited in claim 19. The spring rings 40, 50, 60, 70 of Riches are devoid of a groove to receive a portion of the plug.

As agreed during the personal interview (see Interview Summary), Riches does not disclose the methods recited in claims 4 and 7. Therefore, the rejection of these claims was improper, and the finality of the subject office action should be withdrawn. Moreover, if the next office action is not a notice of allowance, it should be a non-final office action.

With respect to claims 4 and 7, Riches does not disclose engaging the plug with the socket, and moving the lug engaging mechanism with respect to the engaged plug and socket to position the wedge angle with respect to the lug as recited in claims 4 and 7. Riches does not disclose an arrangement wherein the spring rings are movable with respect to an engaged plug and socket.

Also, Riches does not disclose providing a retaining clip having a wedge angle as recited in claims 4 and 7. The Office Action asserts that the spring rings have a wedge angle when a tangent is drawn on the surface. However, Riches discloses spring rings having a curvature, and the tangent is not a wedge angle.

Further, Riches does not disclose selecting the wedge angle in accordance with the predetermined release force as recited in claim 4, and selecting a resilience of the retaining clip in accordance with the predetermined release force as recited in claim 7. The Office Action asserts that the predetermined release forces are not defined, therefore, any force could read on the claim. Applicants disagree with this assertion as the predetermined release force is defined in claims 4 and 7 as the force at which the plug disengages from the socket. In addition, dependent claims 22 and 24 further define the release force as being between 100-300 N. Moreover, Riches fails to disclose the selection of a wedge angle or resilience of the retaining clip. In contrast, Riches merely discloses adjusting the degree at which the spring rings project into the slot (e.g., see col. 3, lines 43-50 and col. 4, lines 11-15).

Withdrawal of the rejection of claims 4 and 7 is respectfully requested.

Claims 5, 6 and 27 are allowable by virtue of their dependence on claim 4 and additionally allowable for their recitation of additional patentable subject matter, and claims 8, 9, 23 and 28 are allowable by virtue of their dependence on claim 7 and additionally allowable for their recitation of additional patentable subject matter. For example, Riches does not disclose pivotally moving a retaining clip to position the wedge angle as recited in claims 27 and 28.

Claims 1, 10-12, 14-16, 25, and 26 are rejected under 35 U.S.C. § 102(b) by Leong et al. (U.S. Patent No. 5,713,752). This rejection is respectfully traversed.

As agreed during the personal interview (see Interview Summary), Leong does not disclose the plug retaining assembly as recited in claim 1.

Leong does not disclose a retaining clip including a sloping surface that engages the lug, wherein the sloping surface has an angle that is at least partially determinative of the predetermined release force as recited in claim 1. The Office Action asserts that the

predetermined release force is not defined, therefore, any force could read on the claim.

Applicants disagree with this assertion as the predetermined release force is defined in claim 1 as the force at which the plug disengages from the socket. In addition, dependent claim 20 further defines the release force as being between 100-300 N. Moreover, Leong fails to disclose a sloping surface having an angle, and how such an angle is at least partially determinative of the predetermined release force.

Further, Leong does not disclose a retaining clip that is movable between the non-plug-retaining position and the plug-retaining position while the plug is engaged with the socket as recited in claim 1. Rather, the latch device 40 of Leong comes out of the recess 23 when the connector 10 is unmated from the matable connector 10'.

Withdrawal of the rejection of claim 1 is respectfully requested.

Claims 10-12, 14-16, 25, and 26 are allowable by virtue of their dependence on claim 1 and additionally allowable for their recitation of additional patentable subject matter.

Claims 20, 22 and 24 are rejected under 35 U.S.C. § 103(a) over Riches et al. Claim 20 should be allowable by virtue of its dependence on claim 1 and additionally allowable for its recitation of additional patentable subject matter, claim 22 should be allowable by virtue of its dependence on claim 4 and additionally allowable for its recitation of additional patentable subject matter, and claim 24 should be allowable by virtue of its dependence on claim 7 and additionally allowable for its recitation of additional patentable subject matter.

In addition, Riches does not disclose or suggest such a predetermined release force, i.e., between 100-300 N, and how one would determine such a release force with the arrangement in Riches.


JENKINSON et al.
App'l. No. 10/602,532
December 7, 2005

In view of the above amendments and remarks, Applicants respectfully submit that all claims are patentable and that the entire application is in condition for allowance.

Should the Examiner believe that anything further is desirable to place the application in better condition for allowance, the Examiner is invited to contact the undersigned at the below listed telephone number.

Respectfully submitted,

NIXON & VANDERHYE P.C.

By: 
Paul T. Bowen
Reg. No. 38,009

PTB:IGS/lmr
901 North Glebe Road, 11th Floor
Arlington, VA 22203-1808
Telephone: (703) 816-4000
Facsimile: (703) 816-4100